INTRODUCTION TO

Qualitative Data Analysis

A student-friendly lecture on interpreting interviews, observations, documents, and open-ended research data.

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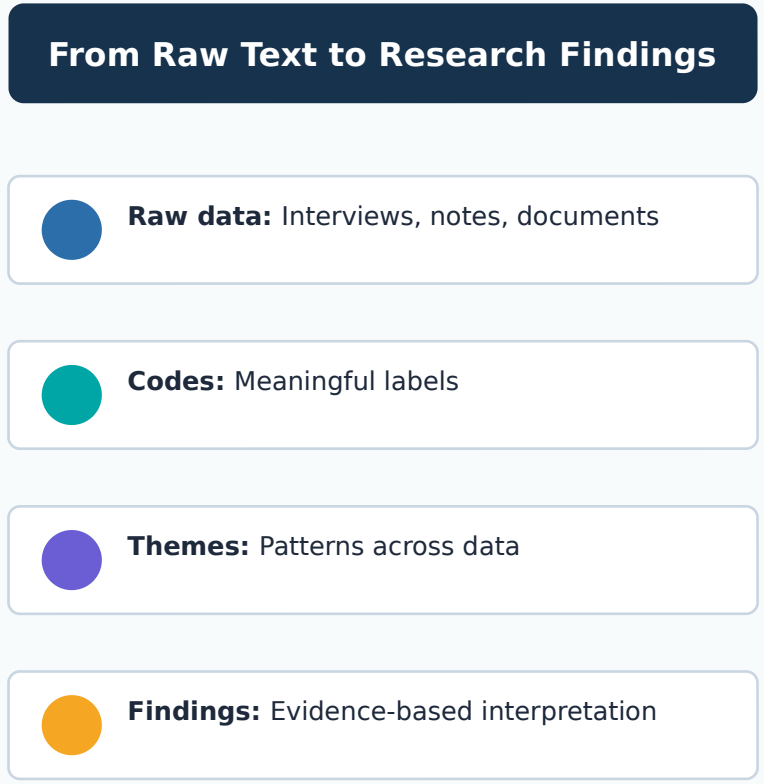

From Raw Text to Research Findings
Raw data: Interviews, notes, documents
Codes: Meaningful labels
Themes: Patterns across data
Findings: Evidence-based interpretation

Lecture Overview

1

Foundations

What qualitative data is and why it matters

2

Approaches

Thematic, content, grounded theory, narrative, discourse and framework analysis

3

Process

Preparing data, memoing, coding, theme development and reporting

4

Application

Examples, research scenario and coding demonstration

5

Evaluation

Strengths, limitations, ethics, mistakes and best practices

The lecture focuses on practical understanding. Students will see how qualitative researchers organize messy data, identify patterns, build interpretations, and communicate findings transparently.

Learning Objectives

AFTER COMPLETING THIS LECTURE, STUDENTS SHOULD BE ABLE TO:

1. Define qualitative data analysis and explain its purpose in academic research.
2. Distinguish between coding, categories, themes, interpretation, and findings.
3. Compare major qualitative analysis approaches and select an appropriate one for a study.
4. Apply a basic step-by-step process for organizing, coding, and interpreting data.
5. Identify ethical issues and quality criteria in qualitative analysis.
6. Evaluate common mistakes and apply best practices when reporting qualitative findings.

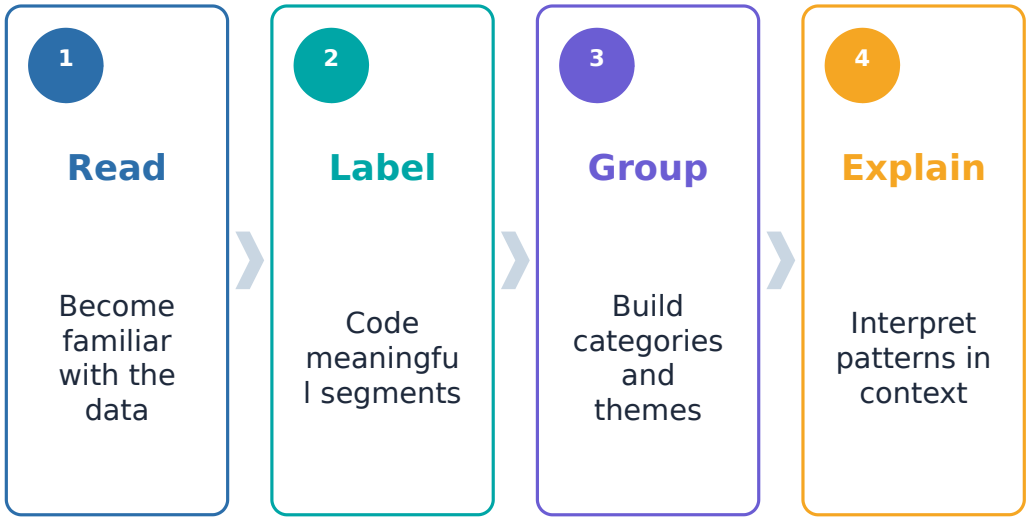
Introduction to Qualitative Data Analysis

Qualitative Data Analysis (QDA) is the systematic examination of non-numerical data to understand meanings, experiences, processes, social interactions, and contexts. It is commonly used when researchers want to explore how people think, feel, behave, communicate, and make sense of events.

Why it matters

QDA turns interviews, field notes, documents, images, and open-ended responses into credible research findings. It allows researchers to preserve participants' voices while also developing analytical explanations.

A simple way to remember QDA



QDA is interpretive, but it should not be arbitrary. Strong qualitative analysis is transparent, disciplined, and grounded in data.

What Counts as Qualitative Data?

Interviews

Transcripts from structured, semi-structured, or unstructured interviews

Focus groups

Group conversations and interaction patterns

Observations

Field notes about behavior, setting, context, and events

Documents

Policies, reports, diaries, minutes, webpages, archival material

Open-ended responses

Text answers from surveys or feedback forms

Visual and digital data

Images, videos, posts, comments, online communities

Qualitative data are often rich, contextual, and detailed. This richness is useful, but it also requires careful organization and interpretation.

Key Definitions

Term	Student-friendly meaning	Example
Code	A short label attached to a meaningful part of data	“lack of support,” “fear of failure”
Category	A group of related codes	barriers to learning
Theme	A broader pattern that answers the research question	students feel isolated in online classes
Memo	A researcher note about analytic ideas and decisions	possible link between workload and stress
Reflexivity	Awareness of how the researcher’s role may shape interpretation	checking assumptions during coding

Background and Academic Context

Roots of qualitative analysis

Interpretivist and constructivist traditions focus on meaning and context.
Ethnography, symbolic interactionism, phenomenology, and grounded theory influenced modern QDA.
Researchers often seek depth, complexity, and participant perspectives rather than statistical generalization.

Contemporary practice

QDA is used across social sciences, education, health, business, IT, and policy studies.
Software can support organization, but it does not replace researcher judgment.
Transparency, reflexivity, audit trails, and rich evidence strengthen credibility.

Core Principles of Qualitative Analysis

1

Meaning

Focus on participants’ interpretations and social meanings

2

Context

Read data in relation to setting, culture, history, and relationships

3

Pattern

Look for recurring ideas, differences, tensions, and exceptions

4

Evidence

Support claims with data extracts and analytic reasoning

5

Reflexivity

Examine the researcher’s assumptions, position, and decisions

Important distinction

Major Approaches to Qualitative Data Analysis

Approach	Main purpose	Common output
Thematic analysis	Identify patterns of meaning across data	Themes with supporting excerpts
Content analysis	Describe or interpret content systematically	Categories, frequencies, interpretations
Grounded theory analysis	Build an explanatory theory from data	Concepts, relationships, model
Narrative analysis	Examine stories and how people construct experiences	Narrative structure and meaning
Discourse analysis	Analyze language, power, and social practices	Interpretation of language use
Framework analysis	Organize data into a structured matrix	Theme-by-case matrix and comparisons

Thematic Analysis

Thematic analysis is a flexible approach for identifying, analyzing, and reporting patterns of meaning across qualitative data. It is especially useful for students because it can be applied to interviews, focus groups, documents, and open-ended survey responses.

1. Familiarize yourself with the data
2. Generate initial codes
3. Search for potential themes
4. Review and refine themes
5. Define and name themes
6. Write the analytic report

Example output

Theme: “Learning alone feels uncertain.” Codes may include confusion, lack of feedback, delayed instructor response, and peer isolation.

Good for

Exploratory studies, experience-focused research, service evaluation, program feedback, and studies with open-ended questions.

Content Analysis

Definition

Content analysis examines the presence, meaning, and patterns of words, ideas, images, messages, or categories in text and media. It may be more descriptive or more interpretive depending on the research design.

Two common forms

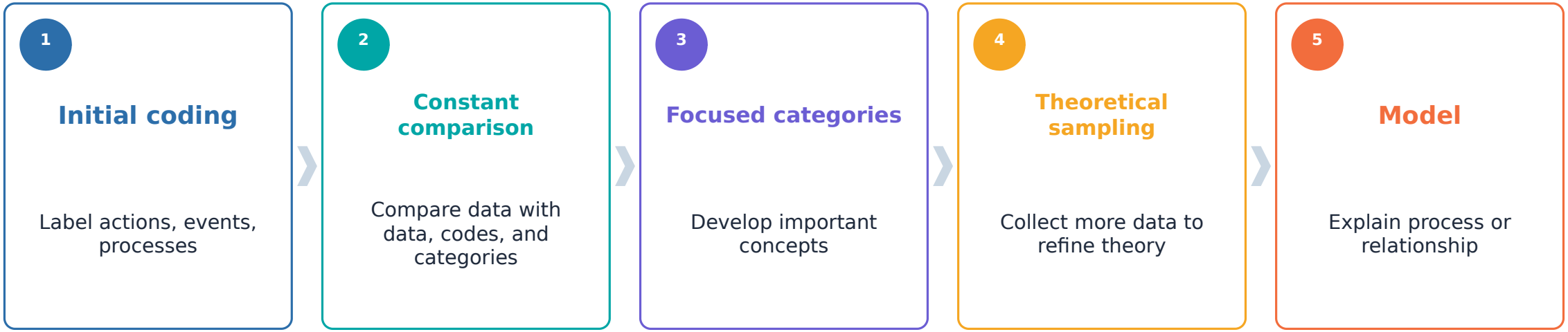
Conventional content analysis develops categories from data. Directed content analysis starts with existing theory or prior concepts and applies them to new data.

Use case	Data example
Media studies	News articles about climate policy
Business	Customer reviews of a service
Education	Teacher feedback comments
Health	Patient information leaflets

A clear coding frame, consistent rules, and transparent examples are important for credibility.

Grounded Theory Analysis

Grounded theory analysis aims to develop an explanation or theory that is grounded in data. Researchers collect and analyze data iteratively, compare cases, and refine concepts until the emerging explanation becomes strong enough.



Example: Developing a model of how first-generation university students learn to navigate academic support systems.

Narrative and Discourse Analysis

Narrative analysis

Studies stories, life histories, identity, sequence, turning points, and meaning-making.
Useful when the research question asks how people construct and tell experiences.
Example: How refugees narrate educational interruption and future aspirations.

Discourse analysis

Studies language as social action, including power, ideology, positioning, and norms.
Useful when the research question asks how language shapes reality or relationships.
Example: How corporate sustainability reports frame responsibility and risk.

Framework and Matrix Analysis

Framework analysis organizes qualitative data into a matrix where rows often represent cases and columns represent themes or topics. It is useful in applied research, policy studies, health services research, and projects with predefined questions.

1. Build an initial analytic framework
2. Summarize data by case and theme
3. Compare patterns across participants
4. Interpret similarities and differences

Participant	Access barriers	Support needs	Perceived outcomes
P1	Transport cost	Flexible schedule	Less stress
P2	Language difficulty	Peer mentor	More confidence
P3	Limited internet	Offline materials	Improved participation

Matrix displays help researchers see the whole dataset without losing individual cases.

Step-by-Step Process of Qualitative Data Analysis

1

Prepare

Transcribe, anonymize, store and organize data

2

Read

Familiarize, memo and note first impressions

3

Code

Label meaningful segments of data

4

Group

Develop categories, patterns and themes

5

Interpret

Explain meaning in relation to questions and theory

6

Report

Present evidence, quotes, limitations and implications

Iterative process

Qualitative analysis rarely moves in a perfectly straight line. Researchers often return to earlier steps as new insights emerge.

Step 1: Prepare and Organize the Data

1. Collect and save data in a secure, organized folder structure.
2. Transcribe audio or video recordings carefully and consistently.
3. Remove direct identifiers and use participant codes where appropriate.
4. Create a data inventory: source, date, participant, context, and status.
5. Choose tools: spreadsheet, word processor, qualitative software, or mixed workflow.

Instructor tip

Poor organization creates analysis problems later. Clean file names, version control, secure storage, and an audit trail are part of rigorous analysis.

Example file naming

Interview_P05_2026-07-02_transcript.docx
FocusGroup_B_fieldnotes.docx
CodingLog_v03.xlsx

Step 2: Familiarization and Memoing

Familiarization means becoming deeply acquainted with the data before making strong claims. Researchers read transcripts, listen to recordings, review field notes, and write memos about early impressions.

Memo prompts

- What seems important here?
- What surprises me?
- What words do participants repeat?
- What does this data suggest about the research question?
- What assumptions might I be bringing?

Analytic memo = thinking record

Memos help make analysis transparent and prevent insights from being forgotten.

Step 3: Coding Qualitative Data

Coding is the process of assigning labels to meaningful segments of data. A code can describe a topic, action, emotion, problem, process, or interpretation.

Type	What it does	Example
Descriptive	Names the topic	online feedback
In vivo	Uses participant’s own words	“I felt invisible”
Process	Captures action	seeking help
Emotion	Captures feeling	anxiety, confidence
Values	Captures beliefs or priorities	fairness, autonomy

Coding advice

Start with many tentative codes, then refine. Keep a codebook with definitions and examples so that codes stay consistent.

1. Code line-by-line or segment-by-segment
2. Compare similar data segments
3. Revise code names and definitions
4. Merge overlapping codes when needed

Step 4: Categories and Themes

Codes	Category	Possible theme
late replies, unclear grades, no comments	feedback problems	Feedback gaps reduce student confidence
working nights, family care, commute	time pressure	Competing responsibilities shape learning experiences
peer group, WhatsApp support, shared notes	informal support	Students build alternative support networks

Step 5: Interpretation and Reporting Findings

Interpretation asks

What does this pattern mean?
How does it answer the research question?
How is it shaped by context?
Does it support, extend, or challenge existing literature?
Are there negative cases or alternative explanations?

Reporting should include

Clear themes or analytic categories
Short participant quotations or data extracts
Explanation of methods and coding process
Reflexivity and limitations
Practical implications or theoretical contribution

Practical Examples Across Disciplines

Discipline	Possible qualitative data	Analysis focus
Social sciences	Interviews with migrants	Identity, belonging, barriers, adaptation
Business & management	Customer reviews and manager interviews	Service quality, trust, complaint patterns
Education	Teacher reflective journals	Classroom challenges and teaching strategies
Health sciences	Patient interviews	Care experiences, communication, treatment burden
Psychology	Counseling session notes	Coping strategies and emotional meanings
Information technology	User testing observations	Usability problems and user expectations

Detailed Research Scenario

Research topic

Experiences of master’s students using AI writing tools for academic assignments.

Element	Scenario details
Research problem	Universities need to understand how students use AI tools ethically and practically.
Research question	How do master’s students describe the benefits, risks, and decision-making involved in using AI writing tools?
Participants	20 master’s students from education, business, and computer science programs.
Data collection	Semi-structured interviews and short reflective learning diaries.
Data analysis	Thematic analysis with initial coding, theme development, memoing, and quote-supported reporting.
Expected interpretation	Students may value speed and feedback but worry about originality, fairness, and academic integrity.

Sample Coding Demonstration

Data extract

“When the teacher replied after several days, I had already submitted the assignment. I felt unsure whether I was improving or just repeating the same mistakes.”

Segment	Initial code	Category	Possible theme
teacher replied after several days	delayed feedback	feedback timing	Delayed feedback weakens learning confidence
already submitted the assignment	missed opportunity	feedback usefulness	Delayed feedback weakens learning confidence
unsure whether I was improving	uncertainty	learning confidence	Delayed feedback weakens learning confidence
repeating the same mistakes	repeated errors	learning barriers	Delayed feedback weakens learning confidence

Comparison Table: Common QDA Approaches

Approach	Best suited for	Main strength	Possible limitation
Thematic analysis	Experiences, views, broad patterns	Flexible and accessible	Can become superficial if themes are weak
Content analysis	Texts, media, documents, responses	Systematic categorization	May miss context if over-counted
Grounded theory	Processes and explanations	Develops theory from data	Time-intensive and methodologically demanding
Narrative analysis	Stories and life histories	Preserves sequence and identity	Less suited to large datasets
Discourse analysis	Language, power, social meanings	Explains language as social action	Requires strong theoretical grounding
Framework analysis	Applied and policy research	Clear matrix for comparison	Can become rigid if poorly used

Advantages of Qualitative Data Analysis

1. Captures depth, detail, complexity, and context that numbers alone may miss.
2. Helps explain how and why people experience social, educational, organizational, or health-related issues.
3. Supports discovery of unexpected themes, meanings, and processes.
4. Gives voice to participants and can inform inclusive research and practice.
5. Useful for developing theories, improving programs, evaluating services, and generating hypotheses for future studies.

Most valuable when the question asks:

“How do people experience this?”

Example: How do patients describe trust during telemedicine consultations?

“Why does this process happen?”

Example: Why do employees resist a new digital reporting system?

“What meanings are attached to this?”

Example: What does academic success mean to first-generation students?

Limitations and Challenges

Common limitations

Analysis can be time-consuming and emotionally demanding.
Interpretations may be influenced by researcher assumptions.
Findings are usually context-specific rather than statistically generalizable.
Large datasets can become difficult to organize without a clear system.
Poorly explained analysis can reduce credibility.

How researchers respond

Use transparent procedures and an audit trail.
Practice reflexivity and discuss positionality.
Use rich descriptions so readers can judge transferability.
Keep a codebook, memo log, and version history.
Connect claims clearly to evidence.

Common Mistakes in Qualitative Data Analysis

1. Starting analysis without a clear research question.
2. Treating themes as simple topics instead of meaningful patterns.
3. Using too many quotes with too little interpretation.
4. Forgetting to define codes or update the codebook.
5. Ignoring negative cases that do not fit the main pattern.
6. Claiming certainty or generalization beyond what the data supports.
7. Failing to explain ethical handling of sensitive participant data.

Best Practices and Quality Criteria

Credibility

Show that interpretations are well supported by data through clear evidence, analytic depth, and attention to alternative explanations.

Transferability

Provide enough contextual detail for readers to judge whether findings may be useful in another setting.

Dependability

Document procedures so another reader can understand how decisions were made, even if they might interpret differently.

Reflexivity

Explain how the researcher’s background, role, relationship to participants, and assumptions may shape interpretation.

Confirmability

Use memos, reflexive notes, and audit trails to show how findings came from the data rather than unsupported preference.

Transparency

Report how data were collected, coded, reviewed, interpreted, and selected for presentation.

Ethical Considerations in Qualitative Analysis

1

Consent

Use data only for purposes explained to participants

2

Confidentiality

Remove identifiers and protect sensitive details

3

Privacy

Secure files and limit access to research data

4

Fair representation

Avoid misleading, selective, or harmful interpretation

5

Transparency

Explain analytic decisions and acknowledge limitations

Special caution

Classroom Activity and Discussion Questions

Activity objective

Practice coding a short qualitative extract and developing a possible theme.

Instructions

1. Read the extract individually.
2. Underline meaningful phrases.
3. Create 3–5 initial codes.
4. Compare codes in pairs.
5. Agree on one possible theme and explain the evidence.

Expected outcome

Students should see that coding involves choices and that strong themes require evidence and explanation.

How can researchers avoid forcing data into preferred themes?
When is it useful to begin with theory, and when is it better to code inductively?
How much quotation is enough to support a finding?
What makes a qualitative interpretation credible?
How should researchers handle data that contradicts their main finding?
Can qualitative findings be useful if they are not statistically generalizable? Why?

Knowledge Check

1. What is the main purpose of qualitative data analysis?
2. Which term refers to a short label attached to a meaningful data segment?
3. In thematic analysis, what is the difference between a topic and a theme?
4. Name one reason why memoing is useful during analysis.
5. Which approach is most associated with developing theory from data?
6. What is an audit trail in qualitative research?
7. Give one ethical concern related to using participant quotations.
8. Why should researchers look for negative cases or contradictions?

Knowledge Check Answer Key

Q	Correct answer / expected response
1	To systematically interpret non-numerical data and develop evidence-based meanings, patterns, or explanations.
2	A code.
3	A topic names an area; a theme expresses a meaningful pattern or analytic claim about the data.
4	Memoing records analytic ideas, questions, decisions, and reflexive awareness during analysis.
5	Grounded theory analysis.
6	A record of analytic decisions, versions, codebook changes, memos, and procedures.
7	Quotes may reveal identity or sensitive information, even when names are removed.
8	They test interpretations, add nuance, and prevent oversimplified claims.

Key Takeaways

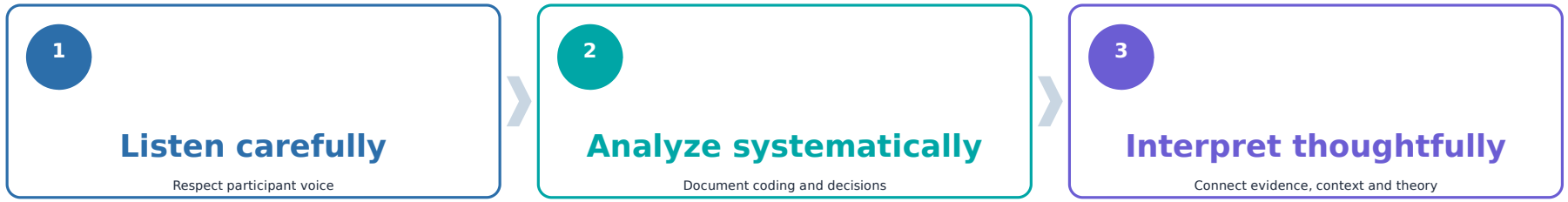
1. Qualitative data analysis is systematic interpretation of text, talk, observation, documents, and other non-numerical data.
2. The goal is to understand meaning, context, processes, experiences, and patterns.
3. Coding helps organize data, but themes and findings require deeper interpretation.
4. Different approaches fit different research questions and traditions.
5. Good QDA is transparent, reflexive, ethical, and clearly connected to evidence.
6. Strong reports explain how findings were developed, not only what participants said.

Conclusion

Qualitative data analysis is essential for research that seeks to understand human meaning, lived experience, social processes, language, culture, and context. It helps researchers move beyond surface description toward careful interpretation.

Final message

A strong qualitative analysis is not judged by the number of codes alone. It is judged by the clarity of its logic, the richness of its evidence, the transparency of its process, and the usefulness of its interpretation.



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